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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CHOI, JACOB Y

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/717,078

Applicant(s)

KENNEDY ET AL.

Examiner

Jacob Y. Choi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/2005 & 11/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Borkowski (USPN 6,247,825).

Regarding claims 1 & 17, Borkowski discloses an instrument panel (Figures 2-3), a control panel attachable to the instrument panel, the control panel comprising a plurality of switches (columns 2-3, lines 58-16) for use by an occupant in the passenger compartment to control, and an illumination source (Figure 8) for selectively illuminating at least one of the plurality of switches (e.g., Abstract), wherein each of the plurality of switches is visible to the occupant only when illuminated by the illumination source.

Regarding claim 2, Borkowski discloses the illumination source comprises a projector for projecting light onto the plurality of switches (Figure 5).

Regarding claim 3, Borkowski discloses the projector is to be located in the passenger compartment (Figures 2-3).

Regarding claims 4, Borkowski discloses the projector projects images (light) onto surfaces associated with the plurality of switches, the associated surfaces visible to the occupant (e.g., abstract).

Regarding claims 5, 6, 8, 9, Borkowski discloses the projector further projects an additional image onto a surface of the control panel / instrument panel visible to the occupant, the surface of the control panel / instrument panel and the projected additional image acting as a display for conveying information to the occupant.

Regarding claim 7, Borkowski discloses each of the plurality of switches (column 4, lines 5-40) is substantially transparent and the projector projects images onto the plurality of switches, the images visible to the occupant.

Regarding claim 10, Borkowski discloses the illumination source is a plurality of light emitting diodes (e.g., 35, 37, 39) in proximity to the plurality of switches (Figures 2-3).

Regarding claims 11-12, Borkowski discloses each of the plurality of switches comprises a membrane switch & a touch activated switch.

Regarding claim 13, Borkowski discloses a control module (Figures 4 & 7) to be provided in communication with the control panel (Figures 2-3) and the illumination source (e.g., 35, 37, 39), the control module for selectively interfacing the control panel with the at least one vehicle system to be controlled, and for controlling the illumination source to selectively illuminate at least one of the plurality of switches based on the at least one vehicle system to be controlled.

Regarding claim 14, Borkowski discloses each of the plurality of switches comprises at least icon for illumination by the illumination source (e.g., 35, 37, 39).

Regarding claim 15, Borkowski discloses the at least one icon comprises a plurality of icons (Figures 2-3), each of the plurality of icons associated with one of plurality of vehicle system.

Regarding claim 16, Borkowski discloses each of the plurality of switches comprises at least one icon for illumination by the illumination source, and wherein the control module selectively illuminates at least one icon based on the at least one vehicle system to be controlled (Figure 4; column 4, lines 40-55).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ebine (USPN 5,987,793) in view of Damiani et al. (US 2002/0080043).

Regarding claims 1 & 17, Ebine discloses an instrument panel (20), a control panel (22) attachable to the instrument panel, the control panel comprising a plurality of switches (13) for use by an occupant in the passenger compartment to control, and an illumination source (L) for selectively illuminating at least one of the plurality of switches (e.g., column 2, lines 20-60), wherein each of the plurality of switches is visible to the occupant only when illuminated by the illumination source* (abstract; *"the display characters are completely invisible when the illuminating light is turned off, whereby the*

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appearance of the display device is rendered congruous with the metallic or similar color of the surrounding cabinet”; columns 4-5, lines 65-15).

Ebine discloses the claimed invention except for the plurality of switches is used for the vehicle system.

Damiani et al. teaches the plurality of switches is used for the vehicle system (Figures 1 & 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize teachings of Ebine within the vehicle system, where the vehicle instrument panel commonly comprise of DVD player or Navigation containing operation means (Figure 2A) of Ebine. In addition, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Note: a. claims in a pending application should be given their broadest reasonable interpretation. *In re Pearson*, 181 USPQ 641 (CCPA 1974).

b. * in order to given patentable weight, a functional recitation must be supported by recitation in the claim of sufficient structure to warrant the presence of the functional language. *In re Fuller*, 1929 C.D. 172; 388 O.G. 279.

Regarding claim 2, Ebine in view of Damiani et al. disclose the claimed invention, explained above. In addition, Ebine discloses the illumination source comprises a projector (e.g., lens; 7) for projecting light onto the plurality of switches.

Regarding claim 3, Ebine in view of Damiani et al. disclose the claimed invention, explained above. In addition, Ebine discloses the projector is to be located in the passenger compartment.

Regarding claim 4, Ebine in view of Damiani et al. disclose the claimed invention, explained above. In addition, Ebine discloses the projector projects images (shown in Figures 2 & 3) onto surfaces (10A) associated with the plurality of switches, the associated surfaces visible to the occupant.

Regarding claim 5, Ebine in view of Damiani et al. disclose the claimed invention, explained above. In addition, Ebine discloses the projector further projects an additional image (additional operational buttons) onto a surface of the instrument panel visible to the occupant, the surface of the instrument panel and the project visible to the occupant, the surface of the instrument panel and the projected additional image acting as a display for conveying information to the occupant (shown in Figures 2 & 3).

Regarding claim 6, Ebine in view of Damiani et al. disclose the claimed invention, explained above. In addition, Ebine discloses the projector further projects an additional image onto a surface of the control panel visible to the occupant, the surface of the control panel and the projected additional image acting as a display for conveying information to the occupant.

Regarding claim 7, Ebine in view of Damiani et al. disclose the claimed invention, explained above. In addition, Ebine discloses each of the plurality of switches is substantially transparent and the projector projects images onto the plurality of switches, the images visible to the occupant.

Regarding claim 8, Ebine in view of Damiani et al. disclose the claimed invention, explained above. In addition, Ebine discloses the projector further projects an additional image onto a substantially transparent surface of the instrument panel, the substantially transparent surface of the instrument panel and the projected additional image (additional operational buttons) acting as a display for conveying information to the occupant (shown in Figures 2 & 3).

Regarding claim 9, Ebine in view of Damiani et al. disclose the claimed invention, explained above. In addition, Ebine discloses the projector further projects an additional image onto a substantially transparent surface of the control panel, the substantially transparent surface of the control panel and the projected additional image acting as a display for conveying information to the occupant.

Regarding claim 10, Ebine in view of Damiani et al. disclose the claimed invention, explained above. In addition, Ebine discloses the illumination source is a plurality of light emitting diodes in proximity to the plurality of switches.

Regarding claim 11, Ebine in view of Damiani et al. disclose the claimed invention, explained above. In addition, Ebine discloses each of the plurality of switches (8) comprises a touch activated field effect switch.

Regarding claim 12, Ebine in view of Damiani et al. disclose the claimed invention, explained above. In addition, Ebine discloses each of the plurality of switches (8) comprises a membrane switch.

Regarding claim 13, Ebine in view of Damiani et al. disclose the claimed invention, explained above. In addition, Ebine discloses a control module to be

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provided in communication with the control panel and the illumination source, the control module for selectively interfacing the control panel with the at least one system to be controlled, and for controlling the illumination source to selectively illuminate at least one of the plurality of switches based on the at least one vehicle system to be controlled.

Regarding claim 14, Ebine in view of Damiani et al. disclose the claimed invention, explained above. In addition, Ebine discloses each of the plurality of switches comprises at least one icon for illumination by the illumination source.

Regarding claim 15, Ebine in view of Damiani et al. disclose the claimed invention, explained above. In addition, Ebine discloses the at least one icon comprise a plurality of icons, each of the plurality of icons associated with one of a plurality of systems.

Regarding claim 16, Ebine in view of Damiani et al. disclose the claimed invention, explained above. In addition, Ebine discloses each of the plurality of switches comprises at least one icon for illumination by the illumination source, and wherein the control module selectively illuminates the at least one icon based on the at least one vehicle system to be controlled.

5. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ebine (USPN 5,987,793) in view of Damiani et al. (US 2002/0080043) as applied to claim 15 above, and further in view of Fukumoto et al. (USPN 6,121,959).

Regarding claim 18, Ebine in view of Damiani et al. disclose the claimed invention, except for an audible actuation notification provide with the actuation of the switch.

Fukumoto et al. teaches the plurality of switches includes an audible actuation notification to provide the occupant with an indication of actuation of the switch (column 8, lines 25-35).

It would have been obvious to one of ordinary skill in the art at the time of the invention to associate sound indication of Fukumoto et al. with the actuation switch of Ebine to notify the user both visually and audibly, while the user functions the system.

Regarding claim 19, Ebine in view of Damiani et al. and further in view of Fukumoto et al. discloses the claimed invention, explained above. In addition, Ebine discloses a control module to be provided in communication with the control panel and the illumination source, the control module for selectively interfacing the control panel with at least one of the plurality of vehicle systems to be controlled, and for controlling the illumination source to selectively illuminate at least one of the plurality of icons based on the at least one of the plurality of vehicle system to be controlled.

Regarding claim 20, Ebine in view of Damiani et al. and further in view of Fukumoto et al. discloses the claimed invention, explained above. In addition, Ebine discloses the illumination source is projector for projecting light onto the plurality of switches.

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6. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borkowski (USPN 6,247,825) in view of Fukumoto et al. (USPN 6,121,959).

Regarding claim 18, Borkowski disclose the claimed invention, except for an audible actuation notification provide with the actuation of the switch.

Fukumoto et al. teaches the plurality of switches includes an audible actuation notification to provide the occupant with an indication of actuation of the switch (column 8, lines 25-35).

It would have been obvious to one of ordinary skill in the art at the time of the invention to associate sound indication of Fukumoto et al. with the actuation switch of Borkowski to notify the user both visually and audibly, while the user functions the system.

Regarding claim 19, Borkowski view of Fukumoto et al. discloses the claimed invention, explained above. In addition, Borkowski discloses a control module to be provided in communication with the control panel and the illumination source, the control module for selectively interfacing the control panel with at least one of the plurality of vehicle systems to be controlled, and for controlling the illumination source to selectively illuminate at least one of the plurality of icons based on the at least one of the plurality of vehicle system to be controlled.

Regarding claim 20, Borkowski in view of Fukumoto et al. discloses the claimed invention, explained above. In addition, Borkowski discloses the illumination source is projector for projecting light onto the plurality of switches.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kodama et al. (USPN 6,234,651) – touch sensitive switch with light

Kato et al. (USPN 6,299,320) – illuminated switch unit

Tholin et al. (USPN 6,558,013) – light-emitting key with multiple independently-illuminated messages, in particular for an activation equipment panel, and a strip constituted by such keys

Parker et al. (USPN 6,508,563) – light emitting panel assemblies for use in automotive applications and the like

Sunaga et al. (USPN 6,871,434) – indicator

Fuwausa et al. (US 2002/0176245) – illumination devices for watches and other instruments

Pontettie et al. (USPN 6,210,010) – illuminated pushbutton with colors and brightness electronically controlled

Anderson, Jr. et al. (USPN 6,773,129) – vehicle interior lighting systems using electroluminescent panels

Misaras (USPN 6,652,128) – backlighting method for an automotive trim panel

Ozaki et al. (USPN 6,621,471) – display device having combined display-panel unit

Lys et al. (USPN 6,717,376) – automotive information systems

Hilsum et al. (USPN 4,529,968) – touch sensitive liquid crystal switch


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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Y. Choi whose telephone number is (571) 272-2367. The examiner can normally be reached on Monday-Friday (10:00-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JC


JOHN ANTHONY WARD
PRIMARY EXAMINER